

**ABSTRACT OF THE DISCLOSURE**

A microscopic optical structure controller for providing singular control of individual microscopic optical structures of a microelectromechanical optical device by a multiplexed stream of individual pixel values generated by a pixel value source. The microscopic optical structure controller includes at least one interconnect coupled to the pixel value source for receiving the multiplexed stream of individual pixel values and at least one mapper communicating with the interconnect for extracting individual pixel values from the multiplexed stream and applying the individual pixel values to one or more individual microscopic optical structures according to a configurable mapping. A method and a driver for providing singular control of individual microscopic optical structures of a microelectromechanical optical device are also disclosed.